

## TRANSMITTAL LETTER TO THE UNITED STATES

DESIGNATED/ELECTED OFFICE (DO/EO/US)

CONCERNING A FILING UNDER 35 U.S.C. 371

208822US6XPCT

U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR

09/831899

INTERNATIONAL APPLICATION NO.

PCT/FR99/02853

INTERNATIONAL FILING DATE

19 November 1999

PRIORITY DATE CLAIMED

25 November 1998

TITLE OF INVENTION

OXYGEN BREATHING MASK WITH SOUND PICK-UP DEVICE

APPLICANT(S) FOR DO/EO/US

REYNAUD Gerard

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (24) indicated below.
4. ☒ The US has been elected by the expiration of 19 months from the priority date (Article 31).
5. ☒ A copy of the International Application as filed (35 U.S.C. 371 (c) (2))
  - a. ☐ is attached hereto (required only if not communicated by the International Bureau).
  - b. ☒ has been communicated by the International Bureau.
  - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
- ☒ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
  - a. ☒ is attached hereto.
  - b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
- ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
  - a. ☐ are attached hereto (required only if not communicated by the International Bureau).
  - b. ☐ have been communicated by the International Bureau.
  - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
  - d. ☒ have not been made and will not be made.
- ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
- ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
- ☐ An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).
1. ☒ A copy of the International Preliminary Examination Report (PCT/IPEA/409).
2. ☒ A copy of the International Search Report (PCT/ISA/210).

## Items 13 to 20 below concern document(s) or information included:

13. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
14. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
15. ☒ A **FIRST** preliminary amendment.
16. ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
17. ☐ A substitute specification.
18. ☐ A change of power of attorney and/or address letter.
19. ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.
20. ☐ A second copy of the published international application under 35 U.S.C. 154(d)(4).
21. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
22. ☐ Certificate of Mailing by Express Mail
23. ☒ Other items or information:

Notice for Consideration of Documents Cited in International Search Report/Notice of Priority/PCT/IB/304  
Drawings (4 Sheets)/PCT/IB/308

Page 2 of 2

208822US6X PCT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF: :  
GERARD REYNAUD : ATTN: APPLICATION DIVISION  
SERIAL NO: NEW U.S. PCT APPLN :  
(Based on PCT/FR99/02853)  
FILED: HEREWITH : EXAMINER: ~  
FOR: OXYGEN BREATHING MASK :  
WITH SOUND PICK-UP DEVICE

PRELIMINARY AMENDMENT

ASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

SIR:

Prior to a first examination on the merits, please amend the above-identified application as follows:

IN THE CLAIMS

Please cancel Claims 1-8 without prejudice.

Please add new Claims 9-16 as follows:

9. (New) Oxygen breathing mask with a sound pick-up device comprising a flexible cap with an exhalation port pierced through the flexible cap and a first microphone capsule positioned above the exhalation port, wherein the mask comprises a mouth-piece mounted in front of the first microphone capsule with an aperture turned towards a location at which a user's mouth is positioned in the mask and, taking this position of the mouth into consideration, the mouth-piece has an axis passing substantially through a junction line of the

user's lips and the aperture is substantially parallel to a labial plane tangential to the user's lips, just before the mouth.

10. (New) Mask according to claim 9, wherein the aperture of the mouth-piece is elliptical with a greatest dimension of the ellipse being parallel to the junction line of the lips.

11. (New) Mask according to claim 9, wherein the mouthpiece has an acoustic screen positioned in the aperture.

12. (New) Mask according to claim 11, wherein the screen is constituted by a metal lattice.

13. (New) Mask according to claim 9, further comprising a baffle fixedly joined to the flexible cap and positioned between the first microphone capsule and the exhalation port.

14. (New) Mask according to Claim 9, further comprising a cable and one of two complementary connection pieces of a releasable connector, connected to a first end of the cable, wherein a second end of the cable is directly connected to the first microphone capsule.

15. (New) Mask according to claim 9, further comprising plural catches fixedly joined to the flexible cap and mounted substantially perpendicularly to an external face of the flexible cap.

16. (New) Mask according to claim 9, further comprising a second microphone capsule, and wherein the first and second microphone capsules are mounted side by side on a base of the mouth-piece.

### IN THE ABSTRACT

Please amend the Abstract as follows:

#### ABSTRACT

Oxygen breathing masks with a sound pickup device. A microphone capsule of the sound pick-up device is positioned at the base of a mouth-piece whose aperture is placed just before the mask user's mouth. Such a mask may find particular application for aircraft pilots.

#### REMARKS

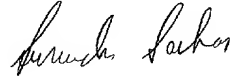
Favorable consideration of this application, as presently amended, is respectfully requested.

The present preliminary amendment is submitted to place the above-identified application in more proper format under United States practice. By the present preliminary amendment original Claims 1-8 have been cancelled and new Claims 9-16 are presented for examination. New Claims 9-16 are deemed to be self-evident from the original disclosure, including original Claims 1-8, and thus are not deemed to raise any issues of new matter. Any differences between new Claims 9-16 and original Claims 1-8 is deemed to at most broaden the scope of new Claims 9-16. The Abstract has also been amended by the present response to be in more proper format under United States practice.

The present application is believed to be in condition for a full and thorough examination on the merits. An early and favorable consideration of the present application is hereby respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.



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**Marked-Up Copy**

Serial No: \_\_\_\_\_

Amendment Filed on: \_\_\_\_\_

IN THE ABSTRACT

Please amend the Abstract as follows:

--ABSTRACT

[The invention relates to oxygen] Oxygen breathing masks with a sound pickup device. A [The] microphone capsule [(2)] of the sound pick-up device [(E)] is positioned at the base of a mouth-piece [(C)] whose aperture is placed just before the mask user's mouth. [Application, in general, in masks] Such a mask may find particular application for aircraft pilots.

[FIGURE 3.]--

41 PRP

09/831899

JCO3 Rec'd PCT/PTC

24 MAY 2001

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## OXYGEN BREATHING MASK WITH SOUND PICK-UP DEVICE

The present invention relates to oxygen breathing masks with an associated sound pick-up device, these masks being used especially by fighter aircraft pilots.

Masks of this kind are known and one of them shall be described here below.

The prior art masks are acoustically unsatisfactory when the conditions of use are poor or when specific operations, such as voice recognition, have to be implemented.

The aim of the present invention is to improve existing masks in order to improve their acoustic characteristics.

This is obtained especially by modifying the sound pick-up mechanism within the mask.

According to the invention, there is proposed an oxygen breathing mask with sound pick-up device comprising a flexible cap with a respiratory aperture pierced through it and a microphone capsule positioned above the aperture, characterized in that the mask comprises a mouth-piece, this mouth-piece being mounted in front of the capsule, with its aperture turned towards the location at which the pilot's mouth gets positioned in the mask and, taking this position of the mouth into consideration, in that the mouth-piece has its axis passing substantially through the junction line of the lips and its aperture is substantially parallel to the labial plane, namely to the plane tangential to the two lips, just before the mouth.

The present invention will be understood more clearly and other features shall appear from the following description and the appended figures, of which:

- Figure 1 shows a mask according to the prior art,
- Figure 2 shows a first mask according to the invention,
- Figure 3 shows a second mask according to the invention,
- Figures 4a, 4b, 5a, 5b, 5c, 5d and 6a, 6b show views of elements proper to the mask according to Figure 3,
- Figures 7 and 8 show two drawings respectively pertaining to the masks according to Figures 1 on the one hand and 2, 3 on the other.



In the different figures, the corresponding elements are designated by the same references.

Figure 1 gives a side view of a face of a pilot and, on his face in a vertical sectional view, the flexible cap 1, made of natural rubber, of an oxygen-breathing mask. In the representation according to Figure 1, as also in the representations according to Figures 2 and 3, only the cap is seen in a section. Similarly in Figure 1 and Figures 2 and 3, the rigid shell that covers the cap 1 on the side opposite the face has not been shown in order to simplify the drawing and also because it makes no contribution to the understanding of the invention.

With respect to a horizontal plane passing through the pilot's lip line, the cap is pierced with a 34 mm diameter hole A located beneath this plane, and comprises a microphone capsule housing 10 located above this plane.

The hole A constitutes the exhalation port of the cap. It enables the mounting of an exhalation valve that is not shown. The respiratory port of the mask is placed on the left-hand side of the cap.

The housing 10 is a sort of cavity whose walls form a first protrusion and second protrusion, respectively on the external wall and internal wall of the cap. The first protrusion is closed while the second protrusion is pierced with a cylindrical hole. A microphone capsule 2, commercially distributed by the firm Silec under reference S4045, is overlaid in a second protrusion where it stands supported on the edges of the cylindrical hole.

A catch 11, perpendicular to the external wall of the cap, is a means of holding the cap in the shell. This catch is mushroom-shaped and the cap is placed flat against the internal surface of the shell with the stem of the "mushroom" passing through a hole of the shell and the head of the "mushroom" placed flat against the external surface of the shell. This catch, as also the walls of the housing 10, is made out of the same material as the rest of the cap.

The assembly of Figure 1 has various flaws, especially: excessive sensitivity to parasitic noises, limited non-flat passband beyond 4 kHz, tendency to acoustic saturation when the pilot speaks loudly, etc.

In a first implementation of the mask according to the invention, it has been proposed to improve the acoustic functioning while, at the same time, keeping the original cap. For this purpose in particular, quite naturally a

search was made for more efficient microphone capsules but, above all, the position of the capsules in the cap was redesigned, means were implemented to concentrate the useful acoustic emissions on the capsule and other means were designed to limit the phenomena that could lead to the saturation of the capsule and limit the noises linked to the helmet such as noises of the opening and closing of clack valves and oxygen intake and exhalation valves.

Figure 2 is distinguished from Figure 1 only with respect to the microphone part. Indeed, the cap 1 remains unchanged but the microphone capsule is no longer overlaid in the housing 10. Instead, there is a matching piece S that partly penetrates the housing in which it is fixed. The part of the element S outside the housing has an arm at the end of which there is mounted a microphone assembly, E, with a mouthpiece C and, behind the mouthpiece, an acoustic chamber G whose side wall is pierced with holes. Inside the chamber, there is a microphone capsule 2 commercially distributed by the firm Panasonic under the reference WM53. The holes pierced in the chamber improve the working of the capsule by achieving a high-pass filtering with a cutoff frequency in the range of 100 Hz.

It must be noted that the axis of the mouth-piece shown by an axis line in Figure 2 passes substantially through the pilot's lip-junction line and that the aperture of the mouth-piece is located in a plane substantially parallel to the labial plane, namely the plane tangential to the two lips, just in front of the mouth. The labial plane is perpendicular to the plane of Figure 2, and its trace in the plane of Figure 2 has been drawn with axis type lines.

In order to limit the entry, into the capsule, of the disturbing noises caused by the opening of the exhalation valve positioned in the port A, when the user speaks, a baffle, D, consisting of an aluminum plate is interposed between the location of the capsule 2 and the port A. This plate is screwed into the cap 1 at its upper ridge located slightly above the port A.

A second implementation of the mask according to the invention is illustrated in Figure 3. In this case, it is no longer a mask according to the prior art, adapted to the invention, but a specially designed mask for the implementation of the invention.

The flexible cap 1 has been redesigned:

- the housing 10 has been reduced in volume and no longer forms a protrusion on the external wall of the cap. This reduction in volume of the housing 10 increases the available space towards the bottom of the mask, permitting an optimal placing of the microphone assembly in the axis of the mouth, and making it possible to propose detachable mouth-pieces made in different sizes, namely in different mouth-piece heights in order to position the aperture of the mouth-piece in taking account of the morphology of the bottom of the mask user's face. In the example described, the mouth-piece is proposed in four different heights ranging from 10 to 18 mm. The goal is to make the distance between the lips and the mouth-piece as small as is permitted by the condition of avoiding discomfort according to which the lips should never be in contact with the mouth-piece. In figure 3, this possibility of choosing between several heights of mouth-pieces is illustrated by a first mouth-piece drawn in solid lines adapted to the position of the user's lips and a second mouth-piece in a withdrawn position with respect to the first one, the front of this second mouth-piece being shown by dashes;

- six additional catches, of which two 11' and 11" appear in Figure 3, have been added. These six catches have the same shape and constitution as the catch 11 and, like the catch 11, they are perpendicular to the external face of the cap. The catches 11 and 11' are located on either side of the port A. Two of the other four catches are located on the left flank of the cap on either side of the respiratory port while the last two catches are located on the right flank of the cap, symmetrically with respect to the two catches of the left flank. These additional catches hold the cap more securely inside the shell and reduce the low-frequency parasitic vibrations of the cap and therefore the disturbances that they produce in the microphone capsule, especially when the user of the mask is speaking.

The reduction of the volume of the housing 10 leads to a corresponding reduction of the part of the matching piece S that penetrates the housing 10. Figures 4a, 4b show this matching part seen in a top and side view, with an upper bowl-shaped part and a lower part with a cylindrical hole pierced through it.

The microphone assembly E is practically unchanged. However, we must note the addition of an acoustic screen F at the aperture of the mouth-piece. This acoustic screen consists of a fine metal lattice made of stainless

steel. It must be noted that the acoustic screen may be constituted conventionally by foam or fabric but that these materials are less well suited to being used in a mask. Figures 5a, 5b, 5c pertain to this microphone assembly comprising: the mouth-piece referenced C with the acoustic screen, referenced F, and the acoustic chamber, referenced G, with its front part constituting the housing for the microphone capsule and its rear part being laterally pierced with holes. Figure 5a is a longitudinal sectional view of the mouth-piece C with the screen F. Figure 5b is a view, also in a longitudinal section, of the acoustic chamber G. This figure shows a circular groove T surrounding the chamber G in its front part. This groove T serves as the housing for an O-ring that is not shown. This O-ring is designed to provide an efficient mechanical link between the mouth-piece and the chamber after these two parts are fitted into each other. This solution enables the mouth-piece to be easily assembled and disassembled, without tools, for maintenance operations. It must also be noted, as can be seen in Figure 5c, that the mouth-piece has an elliptically sectioned aperture whose biggest dimension is parallel to the user's lip junction line.

Figure 5d is a sectional view, perpendicular to the axis of the mouth-piece, pertaining to the microphone assembly if this assembly has not just one microphone capsule at the base of the mouth-piece but two capsules 2, 2'. This is possible because of the small size of the capsules used. The two capsules are mounted side by side in a space whose biggest dimension is horizontal and parallel to the user's lip junction line. It must be noted that Figures 5a, 5b, 5c are the same for a microphone set with one capsule and for a microphone set with two capsules. It must also be noted that, in the case of two capsules, each capsule is connected to the on-board electronic circuitry by a different pair of wires. In certain applications, this gives a replacement capsule for cases of malfunctioning of the commonly used capsule. In other applications it makes it possible to dedicate one of the two capsules to a voice command system. Naturally, in the event of a microphone set with two capsules, the matching piece 5 according to Figures 4a, 4b must be modified. Its lower part pierced with a hole must be widened and the hole must be enlarged so that the rear part of the microphone assembly E can be introduced therein.

The baffle D has been improved. It is no longer a practical flat part but a curved part better suited to its role of acoustic screen. Figure 3 shows the baffle D in a side view. Two Figures 6a and 6b again show the baffle but respectively in a top and side view, with this second side view that is at right angles to the first one and is taken from the cap 1 side located below the baffle. Figure 6a shows three holes used to fasten the deflector in the cap 1 by means of screws. These holes are distributed on a flat half-collar whose concave edge is the convex edge of a curved crescent-shaped part.

Figures 7 and 8 are two representations of a block diagram type respectively pertaining to a mask according to the prior art and according to the invention. In the case of Figure 7, with a pilot's mask fitted out with a Silec S4045 microphone capsule, the signals given by the capsule are very low in level and have to be amplified in a preamplifier before they are transmitted through a connection cable K provided with a connector J to the electronic circuitry of the aircraft. It must be noted that the connector used for the pilot's mask is a releasable connector in the sense that the two complementary connection pieces, one male and one female, that form it get separated in the event of high tensile force on the connecting cable. In Figure 8, with the pilot's mask fitted out with a Panasonic WM53 microphone capsule, the signals given by the capsule have a sufficient level not to require any preamplifier between the capsule and the connection cable K provided with its releasable connector J.

The present invention is not limited to the examples described but relates to all breathing masks provided with a microphone device with a mouth-piece whose aperture is placed before the pilot's mouth.

## CLAIMS

1. Oxygen breathing mask with sound pick-up device comprising a flexible cap (1) with an exhalation port (A) pierced through it and a microphone capsule (2) positioned above the port, characterized in that the mask comprises a mouth-piece (C), in that this mouth-piece is mounted in front of the capsule, with its aperture turned towards the location at which the pilot's mouth gets positioned in the mask and, taking this position of the mouth into consideration, in that the mouth-piece has its axis passing substantially through the junction line of the lips and its aperture is substantially parallel to the labial plane, namely to the plane tangential to the two lips, just before the mouth.

2. Mask according to claim 1, characterized in that the aperture of the mouth-piece (C) is elliptical with the greatest dimension of the ellipse being parallel to the junction line of the lips.

3. Mask according to claim 1, characterized in that the mouth-piece (C) has an acoustic screen (F) positioned in its aperture.

4. Mask according to claim 3, characterized in that the screen (F) is constituted by a metal lattice.

5. Mask according to claim 1, characterized in that it comprises a baffle (D) fixedly joined to the cap and positioned between the capsule (2) and the exhalation port (A).

6. Mask according to any of the above claims, comprising a cable (K) and one of the two complementary connection pieces of a releasable connector (J), connected to the first end of the cable, characterized in that the second end of the cable is directly connected to the cell (2).

7. Mask according to claim 1, characterized in that it comprises several catches (11, 11', 11'') fixedly joined to the cap (1) and mounted substantially perpendicularly to the external face of the cap.

8. Mask according to claim 1, characterized in that it comprises an additional microphone capsule (2') and in that the two capsules (2,2') are mounted side by side on the base of the mouth-piece.

**ABSTRACT**

The invention relates to oxygen breathing masks with sound pick-up device.

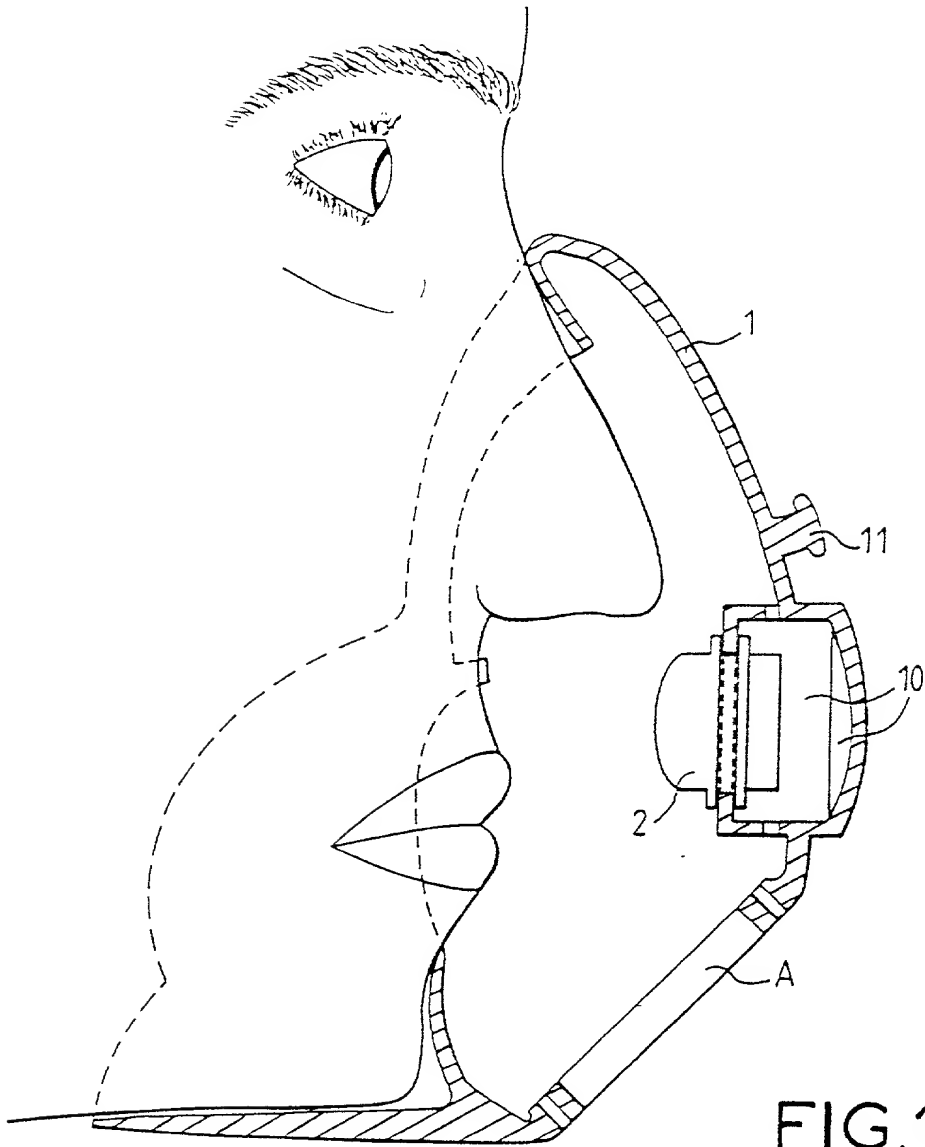
5       The microphone capsule (2) of the sound pick-up device (E) is positioned at the base of a mouth-piece (C) whose aperture is placed just before the mask user's mouth.

Application, in general, in masks for aircraft pilots.

10       FIGURE 3.

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1/4





2/4

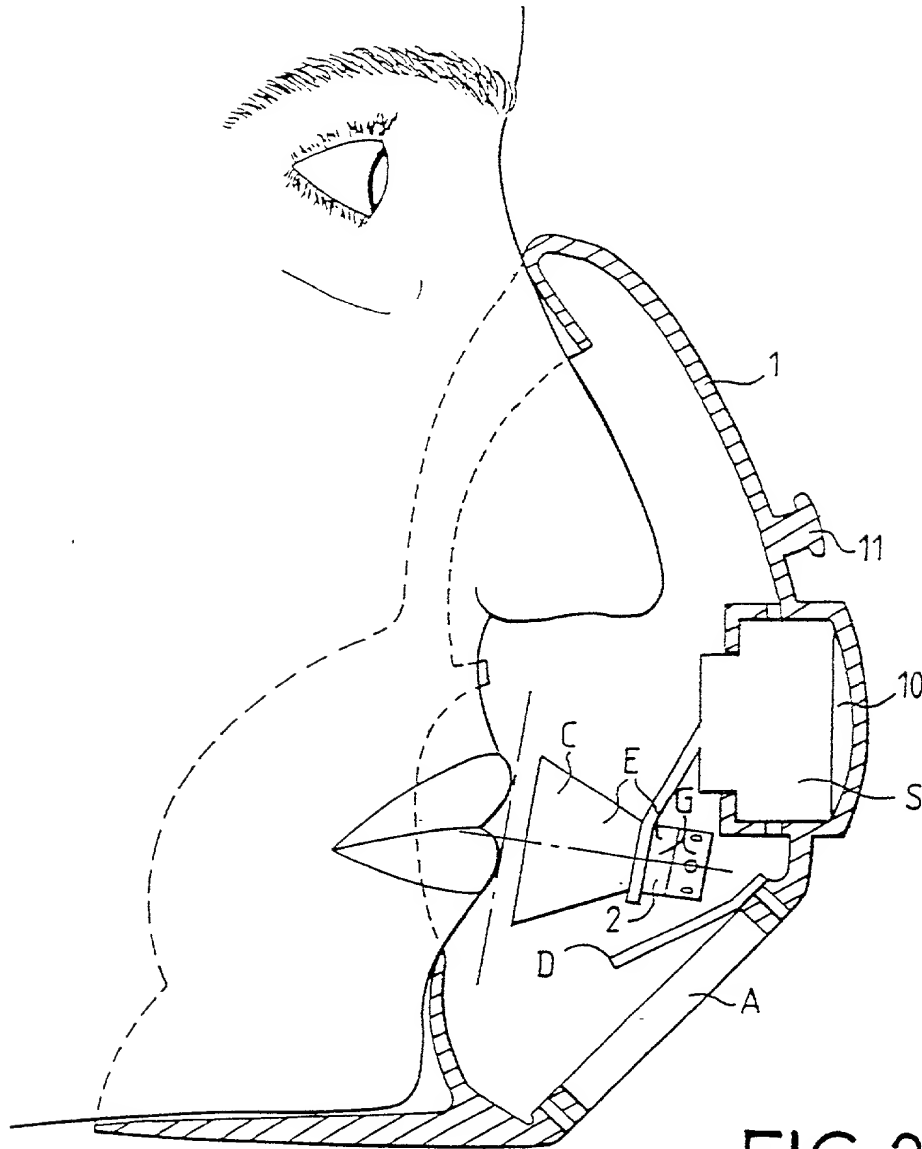


FIG. 2

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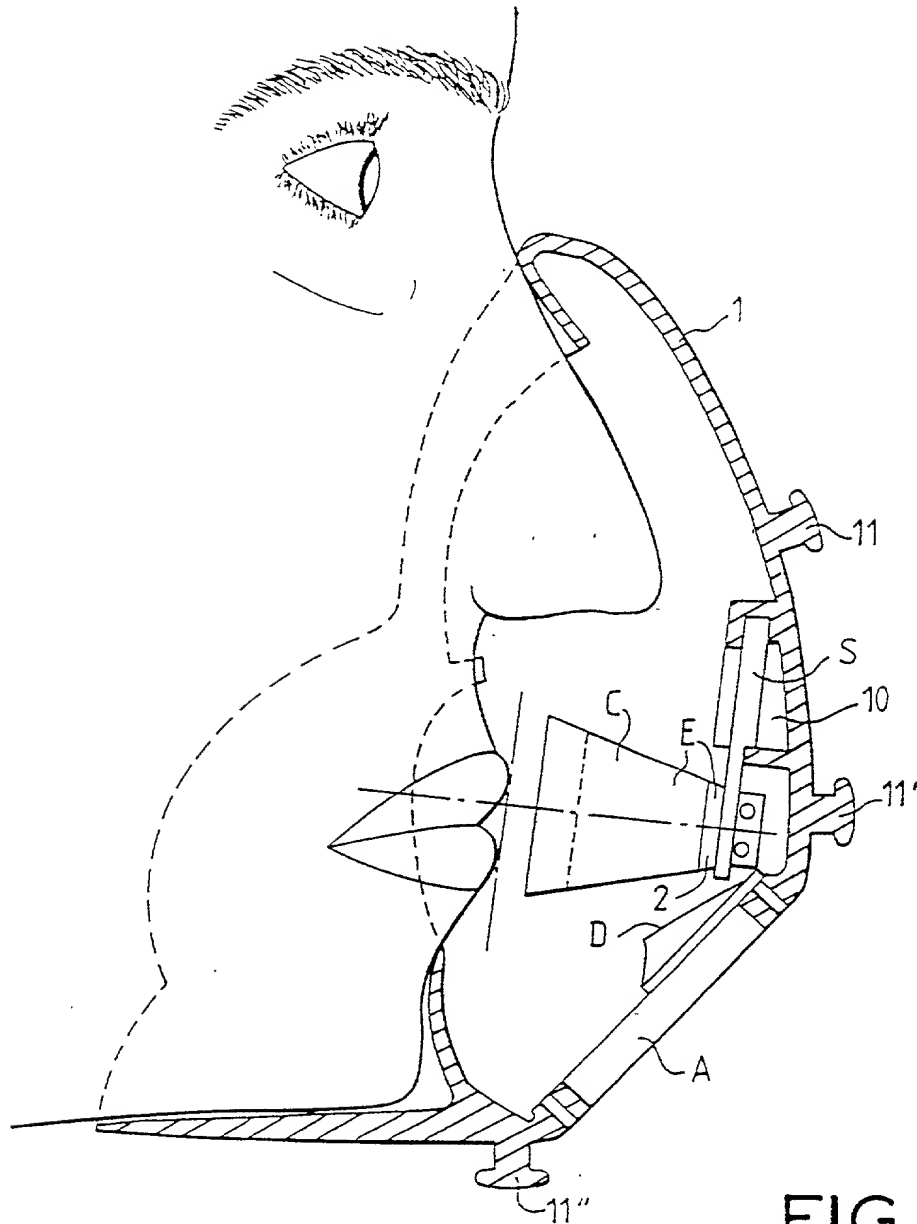


FIG. 3

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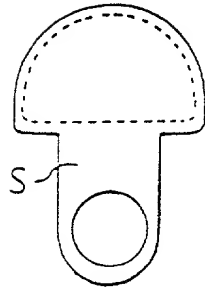


FIG. 4a

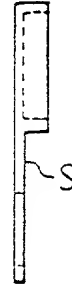


FIG. 4b

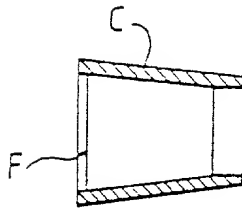


FIG. 5a

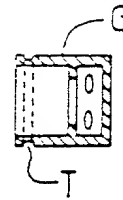


FIG. 5b

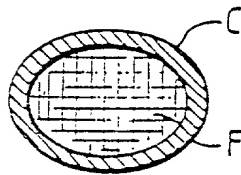


FIG. 5c

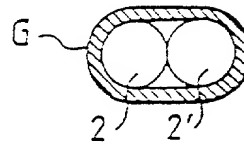


FIG. 5d

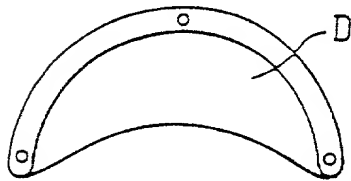


FIG. 6a

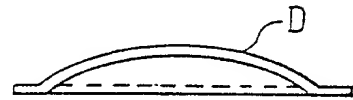


FIG. 6b

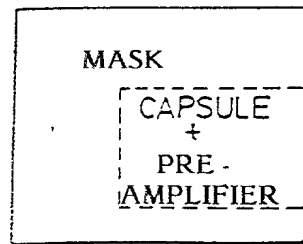


FIG. 7

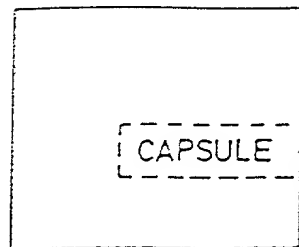


FIG. 8

# Declaration and Power of Attorney for Patent Application

## Déclaration et Pouvoirs pour Demande de Brevet

### French Language Declaration

En tant l'inventeur nommé ci-après, je déclare par le présent acte que:

As a below named inventor, I hereby declare that:

Mon domicile, mon adresse postale et ma nationalité sont ceux figurant ci-dessous à côté de mon nom.

My residence, post office address and citizenship are as stated next to my name.

Je crois être le premier inventeur original et unique (si un seul nom est mentionné ci-dessous), ou l'un des premiers co-inventeurs originaux (si plusieurs noms sont mentionnés ci-dessous) de l'objet revendiqué, pour lequel une demande de brevet a été déposée concernant l'invention intitulée

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

OXYGEN BREATHING MASK WITH SOUND  
PICK UP DEVICE

et dont la description est fournie ci-joint à moins

the specification of which:

☐ ci-joint

☐ is attached hereto

☒ a été déposée le \_\_\_\_\_

☒ was filed on 19 November 1999

sous le numéro de demande des Etats-Unis ou le numéro de demande international PCT

as United States Application Number or PCT International Application Number

\_\_\_\_\_ et modifiée le

PCT/FR99/02853 and was amended on

\_\_\_\_\_ (le cas échéant).

\_\_\_\_\_ (if applicable).

Je déclare par le présent acte avoir passé en revue et compris le contenu de la description ci-dessus, revendications comprises, telles que modifiées par toute modification dont il aura été fait référence ci-dessus.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

Je reconnais devoir divulguer toute information pertinente à la brevetabilité, comme défini dans le Titre 37, § 1.56 du Code fédéral des réglementations.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

## French Language Declaration

Je revendique par le présent acte avoir la priorité étrangère, en vertu du Titre 35, § 119(a)-(d) ou § 365(b) du Code des Etats-Unis, sur toute demande étrangère de brevet ou certificat d'inventeur ou, en vertu du Titre 35, § 365(a) du même Code, sur toute demande internationale PCT désignant au moins un pays autre que les Etats-Unis et figurant ci-dessous et, en cochant la case, j'ai aussi indiqué ci-dessous toute demande étrangère de brevet, tout certificat d'inventeur ou toute demande internationale PCT ayant une date de dépôt précédant celle de la demande à propos de laquelle une priorité est revendiquée

I hereby claim foreign priority under Title 35, United States Code, § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below, and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed

Prior Foreign Application(s)  
Demande(s) de brevet antérieure(s) dans un autre pays

Priority claimed  
Droit de priorité  
revendiqué

98 14854      FRANCE  
(Number)      (Country)  
(Numéro)      (Pays)

25 November 1998  
(Day/Month/Year Filed)  
(Jour/Mois/Anné de dépôt)

☒      ☐  
Yes      No  
Oui      Non

\_\_\_\_\_  
(Number)      (Country)  
(Numéro)      (Pays)

\_\_\_\_\_  
(Day/Month/Year Filed)  
(Jour/Mois/Anné de dépôt)

☐      ☐  
Yes      No  
Oui      Non

Je revendique par le présent acte tout bénéfice, en vertu du Titre 35, § 119(e) du Code des Etats-Unis, de toute demande de brevet provisoire effectuée aux Etats-Unis et figurant ci-dessous

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below

\_\_\_\_\_  
(Application No.)  
(N° de demande)

\_\_\_\_\_  
(Filing Date)  
(Date de dépôt)

\_\_\_\_\_  
(Application No.)  
(N° de demande)

\_\_\_\_\_  
(Filing Date)  
(Date de dépôt)

Je revendique par le présent acte tout bénéfice, en vertu du Titre 35, § 120 du Code des Etats-Unis, de toute demande de brevet effectuée aux Etats-Unis, ou en vertu du Titre 35, § 365(c) du même Code, de toute demande internationale PCT désignant les Etats-Unis et figurant ci-dessous et, dans la mesure où l'objet de chacune des revendications de cette demande de brevet n'est pas divulgué dans la demande antérieure américaine ou internationale PCT, en vertu des dispositions du premier paragraphe du Titre 35, § 112 du Code des Etats-Unis, je reconnais avoir divulgué toute information pertinente à la brevetabilité, comme défini dans le Titre 37, § 1.56 du Code fédéral des réglementations, dont j'ai pu disposer entre la date de dépôt de la demande antérieure et la date de dépôt de la demande nationale ou internationale PCT de la présente demande

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s), or § 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application

PCT/FR99/02853

19 November 1999

\_\_\_\_\_  
(Application No.)  
(N° de demande)

\_\_\_\_\_  
(Filing Date)  
(Date de dépôt)

\_\_\_\_\_  
(Status) (patented, pending, abandoned)  
(Statut) (breveté, en cours d'examen, abandonné)

\_\_\_\_\_  
(Application No.)  
(N° de demande)

\_\_\_\_\_  
(Filing Date)  
(Date de dépôt)

\_\_\_\_\_  
(Status) (patented, pending, abandoned)  
(Statut) (breveté, en cours d'examen, abandonné)

Je déclare par le présent acte que toute déclaration ci-incluse est, à ma connaissance, véridique et que toute déclaration formulée à partir de renseignements ou de suppositions est tenue pour véridique, et de plus, que toutes ces déclarations ont été formulées en sachant que toute fausse déclaration volontaire ou son équivalent est passible d'une amende ou d'une incarcération, ou des deux, en vertu de la Section 1001 du Titre 18 du Code des Etats-Unis, et que de telles déclarations volontairement fausses risquent de compromettre la validité de la demande de brevet ou du brevet délivré à partir de celle-ci

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

## French Language Declaration

**POUVOIRS:** En tant que l'inventeur cité, je désigne par la présente l'(les) avocat(s) et/ou agent(s) suivant(s) pour qu'ils poursuive(nt) la procédure de cette demande de brevet et traite(nt) toute affaire s'y rapportant avec l'Office des brevets et des marques: (mentionner le nom et le numéro d'enregistrement).

**POWER OF ATTORNEY:** As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: (list name and registration number)

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Nationalité		Citizenship	
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(Fournier les mêmes renseignements et la signature de tout co-inventeur supplémentaire.)

(Supply similar information and signature for third and subsequent joint inventors.)